

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

In this response claims 1-8 have been cancelled and replaced with new claims 8-13. The cancellation of claims 1-8 is to obviate the rejections under 35 USC § 112, 101 and 102.

The newly presented claims are submitted to be patentable over the cited art. More specifically, the reference 1 (Cheng-Kai Chen) discloses a technology optimizing parameters by a genetic algorithm using the heretofore known BSIM3(Berkely Short-Channle IGFET Model), which is a model for MOSFET. However, the reference 1 does not disclose two-stage optimization processing dividing a parameter group into two groups in accordance with the characteristic of HiSIM (Hiroshima-university STARC IGFET Model) using the HiSIM which is a surface potential model; and adjusting the parameters step by step based on property measured data which are respectively adequate for the two groups.

Moreover, the reference 1 does not disclose crossover processing of the present invention which determines a generating range of a child chromosome group inside a hyperpolyhedron in the vector space which is determined by the center of gravity of the parent chromosome group and value of the parent chromosome group.

Reference 2 (Keser and Joardar) discloses the technology optimizing the parameters by the genetic algorithm using the surface potential model (SSIM) of the MOSFET. However, both niche operation and Nondominated Sorting Procedure shown in the reference 2 are operations for maintaining variety of a chromosome group in a

"calculation of an evaluated value" of each individual, and not the content of the crossover processing.

The Keser and Joardar reference does not disclose the above-mentioned two-stage optimization processing of the present invention, and also the above-mentioned crossover processing of the present invention using the center of gravity.

The third reference to Bittner discloses the technology optimizing the parameters by the genetic algorithm using the heretofore known BSIM, which is a model of the MOSFET. As described from line 58, column 23 of the reference 3, the method of the Bittner reference fastens the parameters previously converged using "meta evolution parameters", and attempts to converge the parameters which are not converged yet.

The Bittner reference does not disclose the two-stage optimization processing of the present invention using the HiSIM, which is the surface potential model, and also the above-mentioned crossover processing of the present invention using the center of gravity.

Newly presented claim 9 contains at least the subject matter of claims 1 to 4. The invention as defined in new claim 9 divides the parameter group into two groups in accordance with the characteristic of the HiSIM and adjusts the parameters step by step based on the property measured data which are respectively adequate for the two groups, so that the efficiency and the accuracy of the processing can be improved.

Further, the crossover processing determines the generating range of the child chromosome group inside the hyperpolyhedron in the vector space which is determined by the center of gravity of the parent chromosome group and the value of the parent chromosome group, so that effective adjustment can be carried out for problems wherein the parameters of adjustment objects are real values.

Also, the crossover processing does not depend on how to make a scale, and is appropriate for the parameter adjustment of the surface potential model such as the HiSIM wherein a number of parameters with different scaling exist.

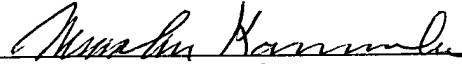
None of the references disclose the structure of the present invention of dividing the parameter group into two groups using the HiSIM and adjusting the parameters step by step, and carrying out the crossover processing using the center of gravity. Therefore, the present invention cannot be easily made from the cited references.

Claims pending in the application are patentable over the cited references for at least the reasons advanced above.

Reconsideration and allowance are earnestly solicited.

One month extension of time is hereby requested. A credit card authorization form in the amount of \$130.00 is attached herewith for the one month extension of time.

Respectfully Submitted,

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